**Balanced expression using stack**

#include < stdio.h >

#include < conio.h >

#define max 50

void main()

{

char stk[max],exp[100];

int top,i;

clrscr();

top = -1;

printf("\nEnter an infix expression ");

gets(exp);

for(i=0; exp[i] != '\0'; i++)

{

if( exp[i]=='(' || exp[i] =='[' || exp[i] == '{' )

{

top++;

stk[top]= exp[i];

}

else

if ( exp[i] == ')' )

{

if( stk[top] == '(' )

top--;

}

else

{

printf("Unbalanced exp");

exit(0);

}

}

else

if ( exp[i] == ']' )

{

if( stk[top] == '[' )

top--;

else

{

printf("Unbalanced exp");

exit(0);

}

}

else

if ( exp[i] == '}' )

{

if( stk[top] == '{' )

top--;

else

{

printf("Unbalanced exp");

exit(0);

}

}

} // for

if( top == -1 )

printf("Exp is balanced");

else

printf("Exp is not balanced");

} // main